Appl. No *To be assigned*, ; Group Art Unit: *To be assigned*;
Dkt. No. 1488.0880003/EKS/PSC; Inventors. Duan *et al* ;;
Tel: 202/371-2600; Title: Antibodies Directed to ELL2, a
New Member of an ELL Family of RNA Polymerase II
Elongation Factors (As amended herein);

```
   CAGTGGCGGCGGGTGCAGAAGCCCAAGCAGCGCGGCCGCAGTGGAGGCTAGAGCCGGAGC
 1 ---------+---------+---------+---------+---------+---------+    60

   GGCGGCGGCGGCGGCACCCCGGGGAGGTTTAAGATGGCGGCGGGGGGGACAGGGGGCCTG
61 ---------+---------+---------+---------+---------+---------+   120
                                     M  A  A  G  G  T  G  G  L

   CGGGAGGAGCAGCGCTATGGGCTGTCGTGCGGACGGCTGGGGCAGGACAACATCACCGTA
121 ---------+---------+---------+---------+---------+---------+  180
     R  E  E  Q  R  Y  G  L  S  C  G  R  L  G  Q  D  N  I  T  V

   CTGCATGTGAAGCTCACCGAGACGGCGATCCGGGCGCTCGAGACTTACCAGAGCCACAAG
181 ---------+---------+---------+---------+---------+---------+  240
     L  H  V  K  L  T  E  T  A  I  R  A  L  E  T  Y  Q  S  H  K

   AATTTAATTCCTTTTCGACCTTCAATCCAGTTCCAAGGACTCCACGGGCTTGTCAAAATT
241 ---------+---------+---------+---------+---------+---------+  300
     N  L  I  P  F  R  P  S  I  Q  F  Q  G  L  H  G  L  V  K  I

   CCCAAAAATGATCCCCTCAATGAAGTTCATAACTTTAACTTTTATTTGTCAAATGTGGGC
301 ---------+---------+---------+---------+---------+---------+  360
     P  K  N  D  P  L  N  E  V  H  N  F  N  F  Y  L  S  N  V  G

   AAAGACAACCCTCAGGGCAGCTTTGACTGCATCCAGCAAACATTCTCCAGCTCTGGAGCC
361 ---------+---------+---------+---------+---------+---------+  420
     K  D  N  P  Q  G  S  F  D  C  I  Q  Q  T  F  S  S  S  G  A

   TCCCAGCTCAATTGCCTGGGATTTATACAAGATAAAATTACAGTGTGTGCAACAAACGAC
421 ---------+---------+---------+---------+---------+---------+  480
     S  Q  L  N  C  L  G  F  I  Q  D  K  I  T  V  C  A  T  N  D

   TCGTATCAGATGACACGAGAAAGAATGACCCAGGCAGAGGAGGAATCCCGCAACCGAAGC
481 ---------+---------+---------+---------+---------+---------+  540
     S  Y  Q  M  T  R  E  R  M  T  Q  A  E  E  E  S  R  N  R  S

   ACAAAAGTTATCAAACCCGGTGGACCATATGTAGGGAAAAGAGTGCAAATTCGGAAAGCA
541 ---------+---------+---------+---------+---------+---------+  600
     T  K  V  I  K  P  G  G  P  Y  V  G  K  R  V  Q  I  R  K  A

   CCTCAAGCTGTTTCAGATACAGTTCCTGAGAGGAAAAGGTCAACCCCCATGAACCCTGCA
601 ---------+---------+---------+---------+---------+---------+  660
     P  Q  A  V  S  D  T  V  P  E  R  K  R  S  T  P  M  N  P  A

   AATACAATTCGAAAGACACATAGCAGCAGCACCATCTCTCAGAGGCCATACAGGGACAGG
661 ---------+---------+---------+---------+---------+---------+  720
     N  T  I  R  K  T  H  S  S  S  T  I  S  Q  R  P  Y  R  D  R

   GTGATTCACTTACTGGCCCTGAAGGCCTACAAGAAACCGGAGCTACTTGCTAGACTCCAG
721 ---------+---------+---------+---------+---------+---------+  780
     V  I  H  L  L  A  L  K  A  Y  K  K  P  E  L  L  A  R  L  Q
```

FIG.1A

Appl. No. *To be assigned*; ; Group Art Unit: *To be assigned*,
Dkt. No. 1488.0880003/EKS/PSC, Inventors: Duan *et al* ;;
Tel: 202/371-2600; Title: Antibodies Directed to ELL2, a
New Member of an ELL Family of RNA Polymerase II
Elongation Factors (As amended herein);

```
781  AAAGATGGTGTCAATCAAAAAGACAAGAACTCCCTGGGAGCAATTCTGCAACAGGTAGCC
     ---------+---------+---------+---------+---------+---------+
     K  D  G  V  N  Q  K  D  K  N  S  L  G  A  I  L  Q  Q  V  A    840

841  AATCTGAATTCTAAGGACCTCTCATATACCTTAAAGGATTATGTTTTTAAAGAGCTTCAA
     ---------+---------+---------+---------+---------+---------+
     N  L  N  S  K  D  L  S  Y  T  L  K  D  Y  V  F  K  E  L  Q    900

901  AGAGACTGGCCTGGATACAGTGAAATAGACAGACGGTCATTGGAGTCAGTGCTCTCTAGA
     ---------+---------+---------+---------+---------+---------+
     R  D  W  P  G  Y  S  E  I  D  R  R  S  L  E  S  V  L  S  R    960

961  AAACTAAATCCGTCTCAGAATGCTACAGGCACCAGCCGTTCAGAATCTCCTGTATGTTCT
     ---------+---------+---------+---------+---------+---------+
     K  L  N  P  S  Q  N  A  T  G  T  S  R  S  E  S  P  V  C  S   1020

1021 AGTAGAGATGCTGTATCTTCTCCTCAGAAACGGCTTTTGGATTCAGAGTTTATTGATCCT
     ---------+---------+---------+---------+---------+---------+
     S  R  D  A  V  S  S  P  Q  K  R  L  L  D  S  E  F  I  D  P   1080

1081 TTAATGAATAAAAAAGCCCGAATATCTCACCTGACGAACAGAGTACCACCAACACTAAAT
     ---------+---------+---------+---------+---------+---------+
     L  M  N  K  K  A  R  I  S  H  L  T  N  R  V  P  P  T  L  N   1140

1141 GGTCATTTGAATCCCACCAGTGAAAAATCGGCTGCAGGCCTCCCACTGCCCCCTGCGGCT
     ---------+---------+---------+---------+---------+---------+
     G  H  L  N  P  T  S  E  K  S  A  A  G  L  P  L  P  P  A  A   1200

1201 GCTGCCATCCCCACCCCTCCACCGCTGCCTTCAACCTATCTGCCCATCTCACATCCTCCT
     ---------+---------+---------+---------+---------+---------+
     A  A  I  P  T  P  P  P  L  P  S  T  Y  L  P  I  S  H  P  P   1260

1261 CAGATTGTAAATTCTAACTCCAACTCCCCTAGCACTCCAGAAGGCCGGGGGACTCAAGAC
     ---------+---------+---------+---------+---------+---------+
     Q  I  V  N  S  N  S  N  S  P  S  T  P  E  G  R  G  T  Q  D   1320

1321 CTACCTGTTGACAGTTTTAGTCAAAACGATAGTATCTATGAGGACCAGCAAGACAAATAT
     ---------+---------+---------+---------+---------+---------+
     L  P  V  D  S  F  S  Q  N  D  S  I  Y  E  D  Q  Q  D  K  Y   1380

1381 ACCTCTAGGACTTCTCTGGAAACCTTACCCCCTGGTTCCGTTCTACTAAAGTGTCCAAAG
     ---------+---------+---------+---------+---------+---------+
     T  S  R  T  S  L  E  T  L  P  P  G  S  V  L  L  K  C  P  K   1440

1441 CCTATGGAAGAAAACCATTCAATGTCTCACAAAAAGTCCAAAAAGAAGTCTAAAAAACAT
     ---------+---------+---------+---------+---------+---------+
     P  M  E  E  N  H  S  M  S  H  K  K  S  K  K  K  S  K  K  H   1500

1501 AAGGAAAAGGACCAAATAAAAAAGCACGACATTGAGACTATTGAGGAAAAGGAGGAAGAT
     ---------+---------+---------+---------+---------+---------+
     K  E  K  D  Q  I  K  K  H  D  I  E  T  I  E  E  K  E  E  D   1560

1561 CTTAAGAGAGAAGAGGAAATTGCCAAGCTAAATAACTCCAGTCCAAATTCCAGTGGAGGA
     ---------+---------+---------+---------+---------+---------+
                                                                   1620
```

FIG. 1B

Appl. No. *To be assigned*, ; Group Art Unit: *To be assigned*;
Dkt. No. 1488.0880003/EKS/PSC; Inventors: Duan *et al.*;;
Tel: 202/371-2600; Title: Antibodies Directed to ELL2, a
New Member of an ELL Family of RNA Polymerase II
Elongation Factors (As amended herein);

```
     L  K  R  E  E  E  I  A  K  L  N  N  S  S  P  N  S  S  G  G

     GTTAAAGAGGATTGCACTGCCTCCATGGAACCTTCAGCAATTGAACTCCCAGATTATTTG
1621 ---------+---------+---------+---------+---------+---------+ 1680
     V  K  E  D  C  T  A  S  M  E  P  S  A  I  E  L  P  D  Y  L

     ATAAAATATATCGCTATCGTCTCCTATGAGCAACGCCAGAATTATAAGGATGACTTCAAT
1681 ---------+---------+---------+---------+---------+---------+ 1740
     I  K  Y  I  A  I  V  S  Y  E  Q  R  Q  N  Y  K  D  D  F  N

     GCAGAGTATGATGAGTACAGAGCTTTGCATGCCAGGATGGAGACTGTAGCTAGAAGATTT
1741 ---------+---------+---------+---------+---------+---------+ 1800
     A  E  Y  D  E  Y  R  A  L  H  A  R  M  E  T  V  A  R  R  F

     ATCAAACTAGATGCACAAAGAAAGCGCCTTTCTCCAGGCTCAAAAGAGTATCAGAATGTT
1801 ---------+---------+---------+---------+---------+---------+ 1860
     I  K  L  D  A  Q  R  K  R  L  S  P  G  S  K  E  Y  Q  N  V

     CATGAAGAAGTCTTACAAGAATATCAGAAGATAAAGCAGTCTAGTCCCAATTACCATGAA
1861 ---------+---------+---------+---------+---------+---------+ 1920
     H  E  E  V  L  Q  E  Y  Q  K  I  K  Q  S  S  P  N  Y  H  E

     GAAAAATACAGATGTGAATATCTTCATAACAAGCTGGCTCACATCAAAAGGCTAATAGGT
1921 ---------+---------+---------+---------+---------+---------+ 1980
     E  K  Y  R  C  E  Y  L  H  N  K  L  A  H  I  K  R  L  I  G

     GAATTTGACCAACAGCAAGCAGAGTCATGGTCCTAGAACTCTGCTTGGACCAGAAGATGT
1981 ---------+---------+---------+---------+---------+---------+ 2040
     E  F  D  Q  Q  Q  A  E  S  W  S  *

     GAATAAACTTAAGCTTATTTATTTAAAATTCCAAATGAGTTGCTCTAGATTCTAAAAAGG
2041 ---------+---------+---------+---------+---------+---------+ 2100

     TGAAACTTTGGCTGTTGAAAGTTTCAGTATTAGTAAACT
2101 ---------+---------+---------+---------  2139
```

FIG.1C

Appl. No. *To be assigned*; Group Art Unit: *To be assigned*;
Dkt. No. 1488.088003/EKS/PSC; Inventors: Duan *et al.*;
Tel. 202/371-2600, Title: Antibodies Directed to ELL2, a
New Member of an ELL Family of RNA Polymerase II
Elongation Factors (As amended herein),

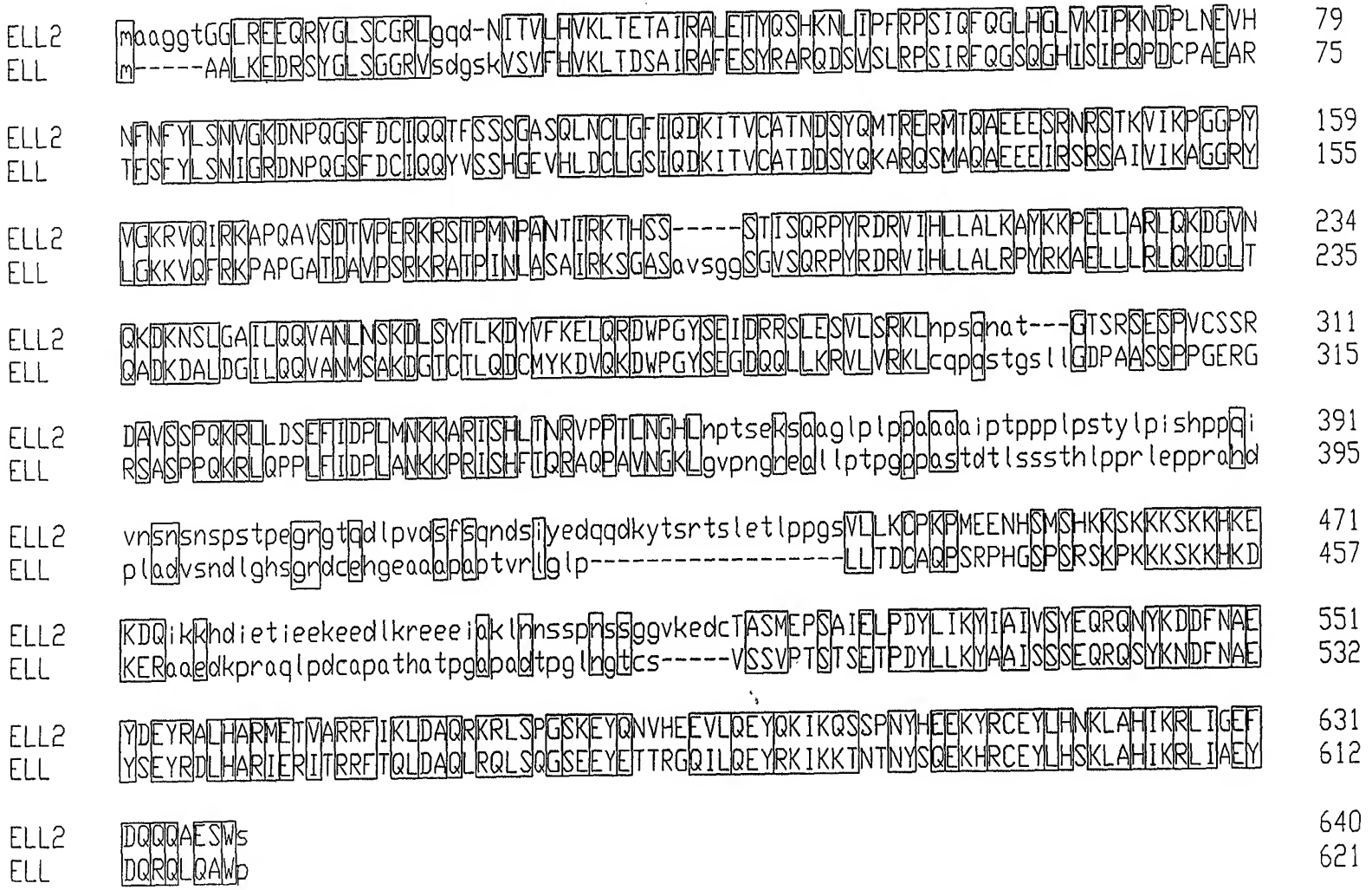
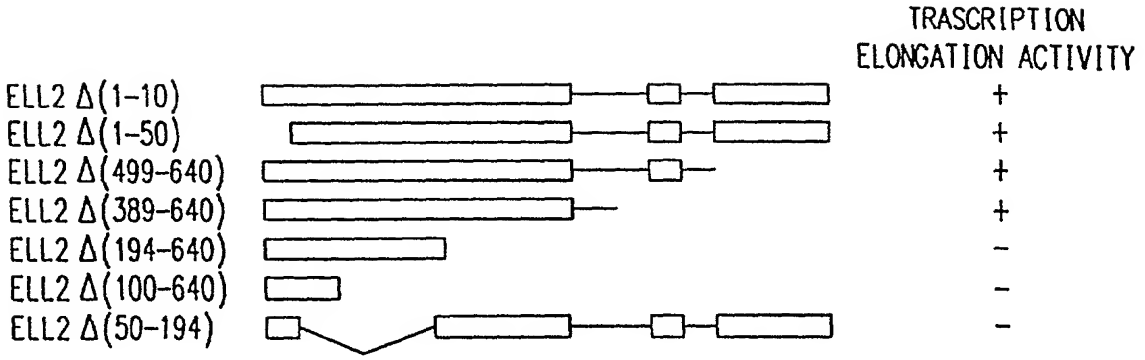
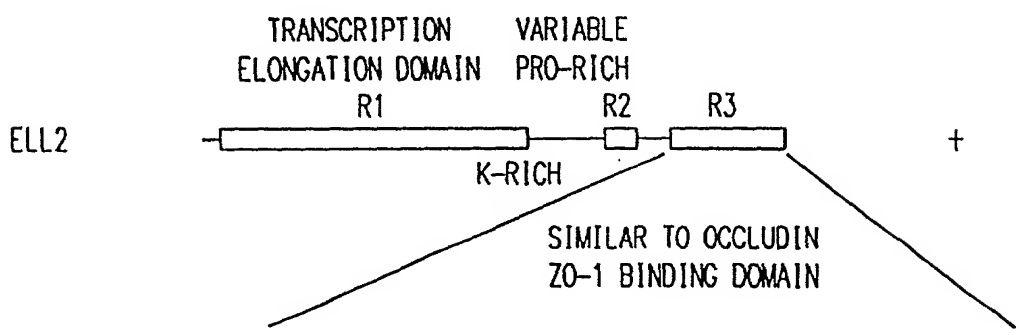


FIG. 2

Appl No. *To be assigned*; ; Group Art Unit: *To be assigned*;
Dkt. No. 1488.0880003/EKS/PSC; Inventors: Duan *et al.*;;
Tel: 202/371-2600; Title. Antibodies Directed to ELL2, a
New Member of an ELL Family of RNA Polymerase II
Elongation Factors (As amended herein);






```
Occludin  415  DWIREYPPITSDQQRQLYKRNFDTGLQEYKSLQSELDEINKELSRLDKEL  464
               |:: .| :|.| :||| || :|:.:.:||:.|:. ::.:.: : :|| :
ELL2      527  DYLIKYIAIVSYEQRQNYKDDFNAEYDEYRALHARMETVARRFIKLDAQR  576

Occludin  465  DDYREESEEYMAAAD....EYNRLKQVKGSADYKSKKNHCKQLKSKLSHI  510
               . ...:|.|| .. :   ||.::|| :|::|...| :|. |..||.||
ELL2      577  KRLSPGSKEYQNVHEEVLQEYQKIKQ..SSPNYHEEKYRCEYLHNKLAHI  624

Occludin  511  KKMVGDYDRQKT      522
               |:::|::|.|..
ELL2      625  KRLIGEFDQQQA      636
```

FIG. 3

Appl. No. *To be assigned*; ; Group Art Unit: *To be assigned*; Dkt. No. 1488.0880003/EKS/PSC; Inventors: Duan *et al.*;; Tel: 202/371-2600; Title: Antibodies Directed to ELL2, a New Member of an ELL Family of RNA Polymerase II Elongation Factors (As amended herein),

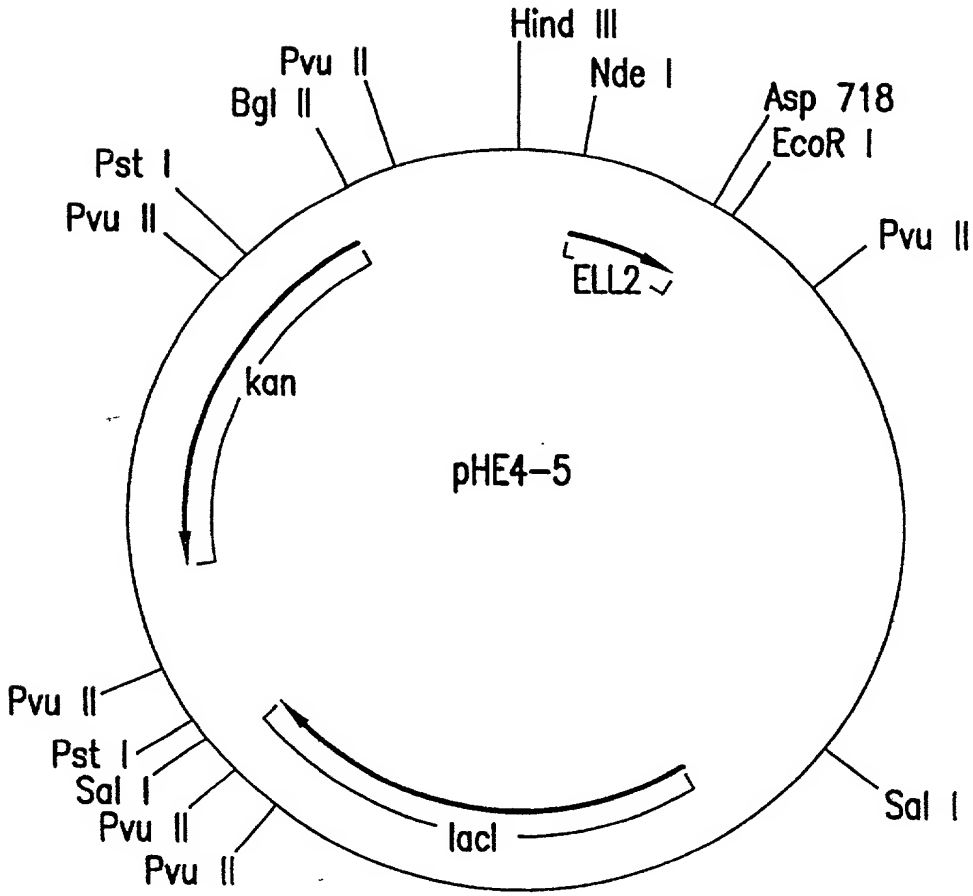


FIG. 4

Appl. No *To be assigned*; ; Group Art Unit: *To be assigned*; Dkt. No 1488 0880003/EKS/PSC; Inventors: Duan *et al* ;; Tel: 202/371-2600; Title. Antibodies Directed to ELL2, a New Member of an ELL Family of RNA Polymerase II Elongation Factors (As amended herein);

FIG. 5